MINUTES OF DOT-AGC BRIDGE DESIGN SUBCOMMITTEE MEETING

The DOT-AGC Joint Bridge Design Subcommittee met on December 11th, 2002. Those in attendance were:

Greg Perfetti	State Bridge Design Engineer (Co-Chairman)
Berry Jenkins	Manager of Highway Heavy Division, Carolinas Branch AGC (Co-Chairman)
Mark Lively	Crowder Construction Co.
Kevin Burns	R. E. Burns & Sons Co.
Richard Holshouser	Sanford Contractors, Inc.
John Olinger	Area Bridge Construction Engineer
Tom Koch	Structure Design Project Engineer (Secretary)
Michael Dane	Dane Construction
Paul Lambert	Structure Design Project Engineer
Ray Moore	Structure Design Staff Engineer
Ricky Keith	Assistant State Bridge Design Engineer
David Moore	Structure Design Engineer

The following items of business were discussed:

1. The minutes of the September 25th, 2002 meeting were accepted.

2. *Profilograph Testing*

   Mr. Koch discussed one of the issues that was raised at the last meeting concerning the new rideability specification. The proposed new specification states that a profilograph test is to be performed by "an independent provider", rather than by the Department or the Contractor. In response to a concern raised by Mr. Jenkins, Mr. Koch agreed to investigate whether there were any independent profilograph testers available to perform this service.

   Mr. Koch stated that he spoke to Cabel Garbee of M & T, who stated that there were no independent testing firms at this time in North Carolina and that the grinding contractors are typically the ones who perform the testing. Mr. Koch said that after discussing the matter with Ron Hancock, the State Bridge Construction Engineer, the wording in the special provision would be revised to state that the testing "shall be scheduled and performed as part of the Contract" and that the Contractor would have to submit a proposed plan of action.

3. Deck Panels Vs. Metal SIP Forms

   Mr. Koch asked the Contractors on the Committee how they felt about using deck panels as opposed to Metal Stay-in-place forms. Currently, it is the Department's policy to detail prestressed girder bridges with panels (except where skew, girder spacing or

cross-slope is extreme) and allowing the Contractors the option to modify the plans if they want to use stay-in-place forms. Over the last few years, it has become apparent that many contractors have always chosen to use SIP forms. Since changing from panels to SIP forms requires the contractor to hire an engineer to change the plans and the department to review the redesign and issue a plan revision, Mr. Koch stated that it might be more beneficial to detail the plans for SIP forms and allow the panels to be substituted for the SIP forms. In response to a question raised by Mr. Koch, none of the contractors present indicated a preference for using panels instead of SIP forms. Mr. Dane and Mr. Lively stated that they always opt to change to SIP forms, while Mr. Holshouser stated that he uses panels because it is simply easier to use what is shown on the plans than to redesign the deck. After some discussion, it was decided that the department would change the current policy and detail all projects in non-corrosive environments with SIP forms with the option to use panels. The current policy of using panels in corrosive areas will remain unchanged.

4. *Aesthetic Details*

David Moore of Engineering Development discussed DOT's department-wide effort to improve bridge aesthetics and Structure Design's proposed plan to tie the level of aesthetic treatment to the visibility and importance of the bridge. David presented some proposed aesthetic treatments for various bridge elements such as columns, bent caps and wing walls and collected comments from the Contractors on the details. Mr. Olinger suggested that an inexpensive way to improve bridge aesthetics is to simply require a Class I surface finish for all prominently visible concrete surfaces, such as concrete caps, columns and outside of barrier rails. After some discussion, the committee agreed that this treatment should be included as part of the aesthetic policy.

5. *Other*

i. Contract Times

Mr. Keith solicited some opinions regarding the speed at which girders can be set while working over traffic. Typically, through traffic must be stopped for periods of time while the girders are being set overhead, so Traffic Control often asks Structure Design for the length of time needed to set one girder. Mr. Keith distributed plans of a curved girder bridge in Wilson County in which the question came up.

Mr. Dane and Mr. Holshouser both stated that the amount of time needed to set a girder depends on the length and weight of the girder, the size of the crane, and, for curved girders, whether the curvature is severe enough that the girders must be placed in pairs. After some discussion, it was agreed that the minimum amount of time to set a typical plate or prestressed girder is 30 minutes if the cranes are already in place. However, the committee agreed that the estimated time for girders with extreme lengths or geometry must be examined on a case by case basis, and that these minimum times will not be achievable in many cases. Finally, it was decided that the Traffic Control Engineer

should be referred to the Assistant State Bridge Design Engineer to determine a reasonable attainable time for the work.

ii. CSX Railroad Issues

Mr. Perfetti reported on the CSX Corporation's increased efforts in monitoring construction operations on their property. He recounted several recent incidents involving DOT projects on CSX property that has resulted in swift action by CSX Corporation.

Several requirements are now being enforced on all CSX projects:

- All girder cranes must be load rated 150% higher than the weight of the piece it will be handling;
- Erosion Control devices must be in place protecting the track and ballast prior to start of any work;
- A letter affirming the Contractor's commitment to safety must be sent to the railroad prior to the start of work

Besides these requirements, Mr. Holshouser stated that a recent railroad submittal to CSX was returned stating that "walking" the girder with a crane is not allowed. He indicated that this was an even larger issue than the increased crane size issue, since some projects can't be built without walking at least one end of the girder into position.

Mr. Perfetti stated that the Department is appealing to CSX to allow the crane's built-in Factor of Safety (between 15 and 25%, depending on the crane) to be counted toward the additional 50% that is now required. Currently, the Railroad has stated that the crane's inherent Factor of Safety could not be counted. Mr. Perfetti plans to keep appealing to CSX on these issues and hopes to have made some progress by the next meeting.

Mr. Perfetti also affirmed that the Department needs to be copied or included on any correspondence between the Railroad, or their Engineering Firm, and the Contractor. He also emphasized that due to past problems, the Department's projects are under heavy scrutiny; any safety infraction or construction mishap that occurs not only affects that project but has an impact on all other current and future Railroad projects throughout the state.

.

.

iii. Next Meeting

The next meeting is scheduled for February 19th at 10:00 a.m. in the Structure Design Unit Conference Room C.

The rest of the year's meetings will be held on the following dates:

April 9th
June 11th
August 13th
October 8th
December 10th